

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number  
**WO 2005/035462 A1**

(51) International Patent Classification: **C04B 5/00,**  
C21C 5/28

**QUINDELER, João [BR/BR];** Rua Olavo Bilac 262,  
Santa Rita-Vila Velha,ES, CEP 29118-480 (BR).

(21) International Application Number:  
PCT/BR2004/000203

(74) Agent: **BORGES WAGNER, José, Fafá;** Rua Diógenes  
Nascimento das Neves 52, Barro, CEP-29057-670 Ver-  
melho, Vitória,ES (BR).

(22) International Filing Date: 15 October 2004 (15.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PI 0306767-0 16 October 2003 (16.10.2003) BR

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(71) Applicant: **COMPANHIA SIDERÚRGICA DE**  
**TUBARÃO [BR/BR];** Av. Brigadeiro Eduardo Gomes,  
CEP-930 Planalto De Carapina, Serra,ES (BR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PIMENTAL,**  
**João, Luiz;** Rua Mário Almeida 24/Itapoã-Vila,  
CEP-29101-752 Vila Velha,ES (BR). **DE ALMEIDA**  
**MELO E SILVA, Marcos, Valério [BR/BR];** Rua José  
de Anchieta Fontana 320, Apto 403, Jardim Camburi,  
CEP-29090-400 Vitória-ES (BR). **DA SILVEIRA NOCI,**  
**Oliveira [BR/BR];** Rua Sete 130, Apto 501, Itaparica,  
CEP-29105-770 Vila Velha,ES (BR). **DE MENDONCA**  
**LASCOURT, Ronaldo [BR/BR];** Rua Alda Siqueira  
Mota 89, Apto 302, Praia da Costa, CEP-29100-420  
Vila Velha,ES (BR). **DE MENDONCA CARVALHO,**  
**Marcio [BR/BR];** Rua Durmalina 44,, Sao Patricio,,  
Jacaralpe, Serra-ES,, CEP 29118-480 (BR). **QUERES**

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS OF INERTIZATION (DAMPENING) OF STEEL MAKING SLAG FOR ECONOMICAL REUSE

(57) Abstract: Is a process intended on reducing the volumetric expansion of steel slag through hydration and carbonation of the free magnesium and calcium oxides contained in the slag. The process is initiated with the preparation of a inertization yard, where the slag will be homogenously distributed until a previously defined thickness is achieved, being, later on, aerated and dampened, which will accelerate the hydration and carbonation chemical reactions on most of the free calcium and magnesium, which are the main responsible for the volumetric expansion of the steel slag, making the slag suitable for use in road works.



WO 2005/035462 A1